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(Modified)U.S. DEPARTMENT OF COMMERCE  
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INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT  
(Use several sheets if necessary)APPLICANT  
Phillip Andrew ArmstrongFILING DATE  
7-25-03

GROUP 1724

(37 CFR 1.98(b))

## U.S. PATENT DOCUMENTS

| EXAM-<br>INER<br>INITIAL | DOCUMENT NUMBER |   |   |   |   |   |   |  | DATE       | NAME            | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|--------------------------|-----------------|---|---|---|---|---|---|--|------------|-----------------|-------|----------|-------------------------------|
| CS                       | 4               | 3 | 6 | 9 | 1 | 5 | 0 |  | 01/18/1983 | Harper          | 261   | 97       |                               |
| CS                       | 5               | 1 | 3 | 2 | 0 | 5 | 5 |  | 07/21/1992 | Alleaume et al. | 261   | 97       |                               |
| CS                       | 5               | 2 | 2 | 4 | 3 | 5 | 1 |  | 07/06/1993 | Jeannot et al.  | 62    | 36       |                               |
| CS                       | 5               | 2 | 4 | 0 | 6 | 5 | 2 |  | 08/31/1993 | Taylor et al.   | 261   | 97       |                               |
| CS                       | 5               | 4 | 6 | 4 | 5 | 7 | 3 |  | 11/07/1995 | Tokerud et al.  | 261   | 97       |                               |
| CS                       | 6               | 2 | 8 | 6 | 8 | 1 | 8 |  | 09/11/2001 | Buhlmann        | 261   | 97       |                               |
| AS                       | 6               | 5 | 1 | 3 | 7 | 9 | 5 |  | 02/04/2003 | Sunder          | 261   | 94       |                               |
|                          |                 |   |   |   |   |   |   |  |            |                 |       |          |                               |
|                          |                 |   |   |   |   |   |   |  |            |                 |       |          |                               |
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## FOREIGN PATENT DOCUMENTS

|    | DOCUMENT NUMBER |    |   |   |   |   |   |  | DATE       | COUNTRY | CLASS | SUBCLASS | TRANSLATION |    |
|----|-----------------|----|---|---|---|---|---|--|------------|---------|-------|----------|-------------|----|
|    |                 |    |   |   |   |   |   |  |            |         |       |          | YES         | NO |
| CS | 0               | 8  | 7 | 9 | 6 | 2 | 6 |  | 25.11.1998 | EPO     | B01D  | 3/20     |             |    |
| CS | 0               | 9  | 9 | 7 | 1 | 8 | 9 |  | 03.05.2000 | EPO     | B01J  | 3/02     |             |    |
| CS | 0               | 1/ | 6 | 6 | 2 | 1 | 3 |  | 13.09.2001 | WIPO    | B01D  | 3/00     | X *         |    |
| CS | 0               | 7  | 8 | 2 | 8 | 7 | 7 |  | 12.09.2001 | EPO     | B01D  | 3/20     |             |    |
| CS | 0               | 6  | 8 | 4 | 0 | 6 | 0 |  | 08.12.1999 | EPO     | B01D  | 3/20     | X **        |    |

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

|    |  |  |
|----|--|--|
| CS |  | Stoter et al., "Measurement and modeling of liquid distribution in structured packings", Chem. Eng. J. (1993) 53   |
| CS |  | 55   |
|    |  | Bulletin 593 entitled "Distillation Pilot Plant Equipment" published by Distillation Engineering Company   |
| CS |  | Bulletin 722 entitled "High Efficiency for: Fast Delivery, Lower Cost, More Theoretical Plates/Ft., Lower Pressure Drop, Higher Capacity, Lower Holdup, Lower Head Room" published by Distillation Engineering Company |
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EXAMINER

N. S. B. S.

DATE CONSIDERED

11-23-04

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

\* US20030090009A1 is US equivalent to WO200166213

\*\* US5897748 is US equivalent to EP684060